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AMERICAN DYESTUFF REPORTER

Vol. III, No. 26

Dec. 23, 1918

The Reporter

Wishes All Elements of the
American Dyestuff Industry

A Very

Merry Christmas

and an

Exceedingly Prosperous and

Happy New Year

ESTABLISHED 1872

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AMERICAN DYESTUFF REPORTER

A Weekly Publication devoted to

DYESTUFFS, COLORS and ALLIED CHEMICALS

"Circulated Everywhere Dyestuffs are Used"

Vol. 3 New York, December 23, 1918 No. 26

OUR PERISHING PRECEDENTS

Mortality High in Tradition Family These Days, Due to War and Rapid Progress—Dye Industry About to Assist at Obsequies of Another?

IT is a well-known fact that, broadly speaking, motion, or change, is life, whereas long-continued inaction produces stagnation and eventually death. A child of five breaks his arm and it is placed in a sling until the bones knit together again. Let him continue to wear his arm in a sling until he is twenty-one, and the arm will be useless.

Precedents and traditions, then, are advantageous only so long as the conditions which produce them and which they are designed to meet continue in existence. And as conditions are constantly changing, and will always continue to change, almost any precedent or set of rules is likely to "go bad" if kept too long.

Certainly we can have no cause to complain of lack of change these days. The present war presents, in fact, what may be termed an unbroken chain of broken precedents. The entry of this country into the conflict constitutes in itself a broken precedent, for the warning contained in the farewell address of one George Washington to beware of entangling alliances, and to keep our skirts clear of European affairs and differences of opinion, had been obeyed religiously ever since it was uttered.

But there was ample reason for discarding this rule, which was laid down for reasons perfectly sound at the time when Mr. Washington occupied the Presidential chair. In those days the United States would have offered easy picking, weakened as it was by the struggle with England, for almost any powerful European nation which desired to enrich itself. We needed time to get upon our feet, to develop our limitless resources and to organize. And so we resolutely refrained from meddling with European politics for many years. The outbreak of the great war, however, found us no longer the comparatively defenseless nation which we were then but, instead, one of the greatest powers in the world, well able to take care of ourselves and to take care of others, too, if need be. Hence, our duty being plain, we sailed into the thick of things, serene in the consciousness of our power and the knowledge that, were he alive, our first President would doubtless have been one of the first to advocate the step.

The extraordinary powers enjoyed

by President Wilson during the progress of the war are likewise, in many cases, examples of hitherto worthy precedents outgrown. His present trip to France is ideally typical of this; and although there are still those who drivel and shake their heads over such a radical move, solely on the ground that "it was never done before," yet the great majority of broad-minded citizenry, refusing to be bound down by narrow traditions and the Chinese theory of respecting one's ancestors, indorse and applaud his action as being in perfect harmony with the altered conditions which prevail to-day.

Yes, these are great days for the joyous smashing of precedents, including the peculiarly obstructionistic idea of the "divine right" of kings, and hence the proposal to quit racking our brains over the erection of a leakproof tariff wall for the protection of the dye industry represents a great step forward in the direction of efficiency and progress, and is in keeping with the times.

In the first place, it has been pointed out on any number of occasions that "there ain't no such animal" as a solid and at the same time absolutely just tariff to be had for this industry. Years of study have failed to produce, from the innermost recesses of some of the keenest minds of the age, a tariff which is satisfactory to all; and, furthermore, no matter whether it be high, low or uses up every numeral handed down to us by the Arabs, it is at best a rather cumbersome sort of thing, for any attempt to change it quickly, or radically, or both, to meet suddenly arisen conditions is sure of much bitter opposition from one party or the other in Congress. The industry, in addition to struggling with fierce foreign competition, is likewise obliged to contend with and circumvent, if possible, the inherited antipathies of a horde of professional politicians whose minds cannot be trained to comprehend the intricacies of a coal-tar chemical schedule during the period of their terms in office, and whose real interests often as not lie in planes as remote as the poles from the real issues involved.

This is, to be sure, no fault of theirs. It is simply a fact that the requisite detailed knowledge and experience cannot be possessed by all who have the shaping of our laws, and they are therefore obliged to substitute principle and party policies for intelligent decision, anxious to please though they may be. The exponent of a high tariff, for instance, will get up in the middle of the night to kill a free-trader, and vice versa. "When in doubt, vote with the party" is a slogan which has killed many a good piece of legislation, although, we are forced to confess, it has also prevented the passage of many an unjust law as well.

However, it is not our intention to quarrel with conditions as they exist; for, as Dr. Taussig pointed out in his recent address, this Government was designed particularly to prevent the continuance in power too long of any particular school of political economy, and there is much to be said on both sides.

The proposal, therefore, to substitute for the Dye Section of the War Industries Board a commission with administrative and legislative powers to look after the interests of the dye industry after the final articles of peace have been signed represents, in our opinion, the very best means of steering clear of the labyrinthine windings and mazes of political precedent.

Such a thing, like so many others during the war, has "never been done before." At least, it has never been done in this country, but it has been tried out, with every prospect of success, in Great Britain. It will mean the breaking of another precedent, sure enough; yet never was there a worthier cause for a demise, nor will there be

FRED WETZEL & CO. N.Y.

less mourning for an interment. The pall-bearers will be recruited from the Dye Section, whose functions will be undertaken by the licensing commission, for they have been the ones elected to apprise Congress of the industry's wish for the innovation.

So far as our opportunities have permitted us to sound out the trade at large, the universal attitude toward the proposal appears to be one of unqualified approval. And this is indeed well, for the trade has been warned that the only chance of securing the acceptance by Congress of wide changes in the present legislation lies in presenting to the public at large and Congress in particular a united front.

Some of the problems involved, should the commission be appointed, still call for the application of much profound thought and study, to be followed by a vote at another gathering of the dye fraternity. This might properly, and likely will, be taken up as one of the principal matters for discussion at the annual meeting of the American Dyes Institute to be held next month.

At the meeting between the dyemen and the War Industries Board representatives, held in Washington, it was, for instance, made plain by Dr. Grinnell Jones, chemist to the Tariff Commission, that a licensing system cannot be applied to dyes only. "If the present system of import and export will be continued," he declared, "I think it will be done on a good many commodities. I doubt if Congress will do it on one industry alone. Isn't it a fact that the dye industry has grown up since the war? Other industries are neglected in the same sense, and I think they should be protected."

"Let's assume," the speaker continued, "if you have a board with the power to prohibit importation of dyes, and that this board ruled a certain dye could not come into this country, would the textile people say that no cloth dyed with that stuff could come into this country? In other words, this license scheme is broader than dyes alone. It has got to apply to other things."

And so, indeed, it has; but for the nonce the principal concern of our readers will be for the dye industry alone. If it develops that they have "started something" by the overthrow of a precedent—something which cannot, perhaps, be applied so happily to other industries—the questions relating to these matters can all be settled later on. For the present, it will be well to concentrate on the issues at hand.

GRASSELLI CHEMICAL CO. TO ACQUIRE DYE DEPARTMENT OF BAYER CO.

The Sterling Products Company, of Wheeling, W. Va., which acquired the stock and properties of the Bayer Company and its subsidiaries at the recent sale conducted by Alien Property Custodian A. Mitchell Palmer, came into being some ten years ago when the interests of a number of proprietary medicine concerns were combined. The present name of the concern, however, was not taken until about a year ago, when the company was incorporated

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ACID
Amacid Fast Yellow R
Amacid Fast Brown G
Amacid Cloth Red B
Amacid Blue Black KN
CHROME
Alizarine Yellow 3G
Alizarine Brown G
Amacid Chrome Red BB
Alizarine Blue Black BB

New England Office:
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Southern Office:
Danville, Va.
Philadelphia Office:
Bulletin Bldg., City Hall Square

under the laws of West Virginia with a capital of $4,000,000, and it is expected that the stock of the concern will now be increased to about $7,000,000. The new stock will first be offered, pro rata, to the present holders of the company, and it is believed that their subscriptions will absorb all of the new issue.

The officials of the company are as follows: President, H. F. Behrens, Jr.; general manager, W. E. Weiss, and secretary-treasurer, A. H. Diebold. These also comprise four of the seven directors of the company, the balance of which consist of Stanley P. Jadwin, of the firm which distributed the products; Otto Schenck, Charles A. Aul and Henry Stifel. Being primarily a drug and medicinal concern, however, it is not the intention of the Sterling Products Company to retain the dyestuff and chemical branches of the business.

Instead, under an agreement made with the Grasselli Chemical Company, of Cleveland, Ohio, made at the time when the Sterling company was contemplating a try for the purchase of the Bayer properties, the dye and chemical departments will pass into the control of the Grasselli company for $2,500,000. The latter concern, as is already known, is of French origin, and the stock is still held by the family connections of those who established the business. To what extent the Grasselli company will increase its stock upon assuming control has not as yet been made public.

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ORTHONITROPHENOL
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METAPHENYLENEDIAMINE
PARAPHENYLENEDIAMINE
PHOSGENE
SALICYLIC ACID

Zobel Color Works Increases Plant

The Zobel Color Works, Inc., has acquired a plant adjoining its present site in Brooklyn which was previously utilized for the manufacture of animal oils. The site is 400 x 180 feet, and has located thereon several large brick buildings. The Zobel company will not attempt to utilize any of the machinery at present in the buildings, but will have them entirely renovated and newly equipped with modern dye-making machinery.

This expansion was determined upon by the Zobel company after a careful consideration of conditions in the dyestuff market. It is their intention to materially increase their present output of Methyl Violet and shortly to produce Methyl Violet 6B in considerable quantity. The new plant will also be utilized for the manufacture of Paraphenylenediamine and some pharmaceutical products, such as saccharine and cumarin. They also expect to be able, in the near future, to manufacture a large proportion of the intermediates required for their present dyestuffs.

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AMERICAN DYESTUFF REPORTER
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MAKE IT UNANIMOUS

The speech of Dr. Taussig at the recent dinner of the Dyestuff Manufacturers' Association showed that the attitude of the Tariff Commission is favorable toward any measure looking to the protection of the American dyestuff industry upon which the industry as a whole can agree. But he made it quite clear that if it became apparent that a wide diversity of opinion existed among the different elements of the industry there would be little or no chance of securing any beneficial legislation in the immediate future.

It is to be earnestly hoped that dyestuff consumers of the country will lend their moral and practical support to any efforts which may be made in this direction. We cannot believe that there is one consumer in a hundred who would knowingly assist in placing America in a position as defenseless in regard to dyestuffs as she was at the outbreak of the late European war, and yet there may be some who will feel that because anything in the way of a protective tariff may mean the payment of somewhat higher prices for dyestuffs, and considering only their pocketbooks, will oppose anything in the way of protection. We believe consumers of the latter class are extremely few in number; in fact, we know them to be so, because of the fact that out of six hundred replies received to a recent questionnaire from this office only a mere handful recommended a low tariff. Nevertheless, even a very few feeble protests against the tariff measure which will be introduced at the next session of Congress might serve to tie it up and prevent action being taken thereon. We sincerely hope that any consumer who may have such a protest in mind will reconsider his decision and, in a patriotic spirit, join with all the other elements of the industry in making the approval of the measure unanimous.

LICENSING IMPORTS

There is another measure looking to the protection of the industry which, to our minds, has far greater possibilities than any tariff legislation—this is the suggestion recently made that the United States adopt a licensing board somewhat similar to that established in England. Under such an arrangement it would become the duty of the board—which would be composed of both consumers and manufacturers—to admit to this country only such foreign-made products as were not competitive with those already produced here in satisfactory quality and quantity. Such an arrangement would do away with the objection often raised by consumers, that an extremely high tariff would prohibit the importation of colors which are vitally necessary to the textile and other trades but which, because of the difficulty of manufacture, have not as yet been successfully produced in this country. If some such proposition as this could be worked out, it is our opinion that it would prove practical and successful in enabling consumers of the country to purchase such foreign colors as were necessary and at the same time would protect the American manufacturers from competition on colors which they are now producing in acceptable quality and quantity, and in the development of which they have spent tremendous sums of money and many months of arduous labor.

TRANSLATING OPTIMISM INTO ACTION

On another page of this issue there is an announcement of a very considerable increase in plant and equipment by

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What the Ending of the War Means to Our Industry

For more than four years the manufacturing powers of our industries have been almost entirely absorbed in meeting the demand for munitions of war.

As the world's largest manufacturers of explosives our responsibilities have been great—how great may be judged when it is known that since the outbreak of the war—a war in which the quantity of men, munitions and equipment employed staggers the imagination—we have been the principal source of explosives not only for this country but for our allies.

With the ending of the war that task is done. From now on our entire resources—men, capital and manufacturing facilities—will be devoted to the making of munitions of peace—to the greater task of winning for America's industries a foremost place in the world reconstruction era that is now beginning.

In our dyestuffs industry, the release of labor from our munitions plants, the availability of men trained in the closely allied explosives industry, hitherto unavailable supplies of crudes and intermediates, and the possibility of needed extensions in our plant facilities, assure from now on rapid and satisfactory development.

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WILMINGTON DELAWARE

the Zobel Color Works, of Brooklyn. This action on the part of the Zobel Company is most interesting, as it denotes a spirit of confidence in the future on the part of the smaller dyestuff manufacturers.

In recent months we have often heard it said that although the dyestuff industry would unquestionably survive in America it would be a survival of the fittest and that only ten or a dozen of the largest manufacturers could profitably remain in business. We have always been of the opinion that this contention was wrong; that smaller manufacturers, if they put out quality products, and particularly if they confined themselves to certain specialties, would find a ready and profitable market for their output. It is encouraging to find that at least one of the smaller manufacturers takes this same view of the situation and has the courage to back up his convictions by an investment in materially increased manufacturing facilities.

THE TAUSSIG SPEECH AGAIN

The view taken by the REPORTER that members of the dye fraternity will do well to display a minimum of discord in presenting their views to Congress on the forthcoming Tariff Commission bill, is evidently shared by an editorial writer in the New York *Times*, who, under the caption "American Dyes," recently commented upon Dr. F. W. Taussig's speech at the American Dyestuff Manufacturers' Association dinner as follows:

"Development of our new dyestuffs industry has been encouraged by the Tariff Commission, and advice given to the manufacturers last week by Chairman Taussig came from a friend. Some of them ask that the industry shall be defended against German competition by exclusion of foreign dyes, the regulation of imports by a license commission, or a large increase of tariff duties. They were told by Dr. Taussig that these proposals were 'radical beyond the limits to which measures must be confined which have a chance of enactment.' The commission has prepared and will send to Congress a bill revising the present classification of dyes and intermediate raw materials. Enactment of it would give the industry some additional defense. Can action upon such changes be taken without regard to partisan differences? Said Dr. Taussig:

'Is it not possible that the dyestuffs industry can be treated by itself? Is there not some chance that it will be considered upon its merits, without regard to political complications, and that the question will be disposed of as a matter needing immediate attention?'

"He sees ground for hope that the case will be regarded by Congress as exceptional and unique, and that the desired legislation will not be affected by partisan controversy over a general tariff policy.

"Our manufacturers of dyes should be guided by the Tariff Commission. They have built up a fine industry whose exports now exceed in value the imports from Germany before the war. Immediate action for defense is not needed. Germany may have no surplus of dyes next year for a foreign market. The high cost of raw materials and intermediates here is declining, and dye prices will naturally be reduced. In this downward movement there is the beginning of defense. And probably the commission's bill revising tariff rates will be passed. If the dye makers are reasonable in their treatment of consumers, giving them the benefit of lower production cost, Congress will not permit the industry to be wrecked."

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TENDERING OF SULPHUR BLACKS

Experiments to Determine the Cause of Tendering on Cotton

By C. M. WHITTAKER

The following article is abstracted from the published work of Dr. Zanker and collaborators dealing with a long series of experiments conducted with a view to throw light on the causes of the tendering of sulphur black dyed cotton. The first experiments were carried out in 1913, and further results have been published at intervals since then. The writer considers the work to be a valuable contribution to the research already carried out by other investigators, and he has confined the experiments to a certain extent.

The method recommended for determining whether a sulphur black will tender or not is carried out as follows:

Dyed samples of equal depth are heated for one hour in an oven at 140 deg. Cent. The bank is then taken out and allowed to lie in the atmosphere till it has taken up the normal amount of moisture. It is then re-heated for a further hour to 140 deg. Cent., taken out and tested.

It is essential to carry out the work in the manner described, because the moisture of the atmosphere plays a definite part in helping the tendering. In every heat task a blank experiment should be made with undyed cotton yarn; this should be heated at the same time, in order to make certain that no tendering of the cotton is caused by the high temperature alone. The progressive rate of tendering is indicated in the following table, and shows the action of temperature in promoting tendering. The same dyeing exposed to the given temperatures took the stated lengths of time to reach the same state of tendering:

Ordinary room temperature	1½ years
45-50 deg. Cent.	10 months
60 deg. Cent.	4 months
80 deg. Cent.	1 month
100 deg. Cent.	72 hours
120 deg. Cent.	31 hours
140 deg. Cent.	2 hours
160 deg. Cent.	1½ hours

In every case free sulphuric acid could be found in the cotton.

The above method of testing has been in use since January, 1907, and since that date has been found to give reliable tests as to the liability of any special sulphur black to cause tendering.

The sulphuric acid did not arise from any free sulphur which might have fastened itself on the fiber, because all yarns before testing were extracted with carbon bisulphide in order to remove all the free sulphur.

The following method is used to determine the amount of total sulphur present in any sulphur black:

Two and a half grams of the material to be tested are put in a beaker with 75 c.c. of bleaching liquor at 2 deg., completely free from sulphate. The cotton is left in this liquor until it is bleached completely white, then squeezed out and immersed in a further 50 c.c. of bleaching liquor for one hour at 30-40 deg. Cent. By this means the last trace of sulphur is quantitatively

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converted into sulphuric acid. The cotton is then washed five times with boiling distilled water and the washings added to the bleaching liquor. The total liquor is then evaporated down and acidified with pure hydrochloric acid, and the solution boiled in order to get rid of all the chlorine. The sulphuric acid is then precipitated by the addition of barium chloride.

The following results were obtained by four different estimations of one and the same dyed material:

Determination	S Calculated as SO_3	S Calculated as Sulphur
1	2.56	1.023
2	2.67	1.070
3	2.65	1.068
4	2.59	1.031

The quantitative estimation of the formation of sulphuric acid in a sulphur black dyeing was carried out as follows:

The material was heated for two hours at 140 deg. Cent., according to the method already described, when it was found that the formation of sulphuric acid, even after heating one hour, was so considerable as to cause the yarn to depreciate 65 deg. in its breaking strength. After the cotton had been heated as above, it was put into an excess of caustic soda liquor, 1-100 normal. The caustic soda liquor was then titrated back and the amount of sulphuric acid was thus determined.

As a controlled experiment the sulphuric acid formed was also determined by precipitation with barium chloride. The figures were found to agree with the caustic soda method.

By this method the following tables were reached:

Determination	S Calculated as Sulphur
1	0.223
2	0.227
3	0.229
4	0.227

The amount of unchanged sulphur still left on the fiber was then determined by the bleaching liquor method:

Determination	S Calculated as Sulphur
1	0.742
2	0.700
3	0.731
4	0.743

To show how close the total of changed and unchanged sulphur corresponds with the total weight of sulphur found on the dyeing, the following table is given:

Determination	Total of Changed and Unchanged Sulphur	Total Sulphur
1	0.965	1.047
2	0.927	1.027
3	0.960	1.045
4	0.970	1.020

The next experiments were carried out to determine whether a longer heating than two hours, as already described, would convert more of the sulphur, shown to be unchanged by this heating, into sulphuric acid, because the above tables show that the proportion of sulphur which can be converted into sulphuric acid by heating at 140 deg. Cent. has a definite relation to the total amount of sulphur present. This relation is 1 of convertible sulphur to 4.5 of total sulphur present. Dyeings were heated for fourteen days to 60-70 deg. Cent., allowing every now and again

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METATOLUYLENEDIAMINE

CHROME RED
PONCEAU SCARLET
ACID YELLOW

CHROME BLUE BLACK
NAPHTHOL GREEN
CHROME NAVY BLUE

the yarn to take up its natural moisture. Although the yarn by this treatment was completely destroyed, the total amount of sulphur converted into free sulphuric acid was not increased by this prolonged heating.

These experiments, therefore, give the definite result that heating at 140 deg. Cent. for two hours is sufficient completely to convert all sulphur in the sulphur black into sulphuric acid which is convertible by this method. In other words, the sulphur that is converted into sulphuric acid, and causes the tendering, is only a definite portion of the total sulphur contents of the sulphur black. Repeated experiments have been made with many sulphur black dyeings, and have confirmed the above results.

In carrying out experiments with the actual dyestuff as distinct from the dyeings, great difficulty was found in purifying the dyestuff. The following method was carried out:

Fifty grams of commercial black were boiled in two liters of distilled water. Dilute acetic acid was then added to the solution until complete precipitation of the dyestuff showed itself by spotting on filtered paper. The precipitate so obtained could not be filtered, but by boiling for a quarter of an hour it gradually became thicker, until washing and filtering were quite possible. The precipitate was washed until there was complete freedom from sulphate and chloride. By this method 40 per cent pure dyestuff was obtained from the commercial dyestuff, and this had an ash content of 1.4 per cent, which consisted of alkali. The total amount of sulphur determined in this pure dyestuff amounted to 33 per cent.

Complete Conversion of Sulphur

For a complete conversion of convertible sulphur into sulphuric acid, the purified dyestuff was heated at 140 deg. Cent. till no increase in the acid contents took place. In a series of experiments the quantity of acid formed amounted to 8.1 per cent calculated as sulphur. This gave a proportion of 1 part of convertible sulphur to 4.1 of complete sulphur contents, which agreed very well with the results obtained by similar treatment of the dyeings, the result in that case being 1 to 4.5.

In the experiments for the conversion of the convertible sulphur in the dyestuff into sulphuric acid it was noticed that the least traces of heavy metals played a very distinct part in the ease with which the sulphur was converted into sulphuric acid. If the dyestuff was purified so that there only remained in the ash small quantities of alkali, the sulphur color had to be heated six times to 140 deg. Cent. in order to convert the convertible sulphur completely into sulphuric acid.

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On the other hand, if the least trace of heavy metals, such as iron, was present, the convertible sulphur was converted into sulphuric acid by only once heating to 140 deg. Cent. The total amount of sulphur converted was the same in each case.

Influence of Salts

In order to determine the influence of salts on the formation of sulphuric acid in sulphur colors, several samples of purified dyestuff were mixed with sodium bicarbonate, sodium acetate and cream of tartar, in addition to traces of iron salts. They were heated four times for one and one-half hours in damp air to 140 deg. Cent. All additions accelerated the formation of acid. As is already known, acid-acting salts and traces of acid were also found to accelerate the production of sulphuric acid.

These results determine that the action of an after-treatment of sodium acetate is solely effective in so far as it neutralizes any acid that is formed, but beyond this the after-treatment does not prevent the formation of sulphuric acid; indeed, the above experiments definitely show that it accelerates the formation of sulphuric acid.

In order to prevent a subsequent conversion of the convertible sulphur on the fiber into sulphuric acid, experiments were carried out to oxidize this sulphur before dyeing. All experiments, however, showed that dyestuffs which were treated in this way lost the greatest part of their valuable dyeing properties. The more sulphur that was oxidized the less soluble did the dyestuff become. The important fact is proved, therefore, that the convertible sulphur in sulphur black dyestuffs is absolutely necessary for the formation of a good black. The contents of convertible sulphur in the sulphur black determine the dyeing power of the black itself.

Summary of Results

The chief results of this work may be summarized as follows:

After removal of any free sulphur by extraction with carbon bisulphide, 20-25 per cent of the sulphur in a sulphur dyestuff exists in the special chemically active and easy oxidized form, and is present on the fiber in the same form. Owing to its very fine state of division in the cellulose fiber, it is easily oxidized and causes the tendering. The remaining 80 per cent of the sulphur can only be oxidized to sulphuric acid by strong treatment, when the color is completely destroyed.

Sulphur, therefore, in sulphur blacks is present in three forms:

1. Mechanically free sulphur, which may be extracted with carbon bisulphide.

2. Easily oxidizable, chemically active sulphur, which, by heating the dry dyestuff or the actual dyeing in the presence of air, is easily converted into sulphuric acid. This quantity amounts to 20-25 per cent of the sulphur contents.

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3. Firmly combined or stable sulphur, only oxidizable by strong oxidizing agents, which entails the complete destruction of the dyestuff. This quantity amounts to 50-75 per cent of the total sulphur contents.

The mechanically mixed or free sulphur plays no part in the dye properties of the color, nor does it play any part in the tendering.—*The Dyer and Calico Printer.*

INQUIRY DEPARTMENT

All classes of chemical work or advice relating to artificial colors, natural dyestuffs, dyewoods, raw materials, extracts, intermediates, crudes, or dyeing chemicals and accessories in general, will be carried out for readers and subscribers of the AMERICAN DYESTUFF REPORTER by this department.

Inquiries of a minor character will be answered on this page, while major matters involving personal investigation, analyses, perfected processes and working formulas, will, if desired, be treated confidentially through the mails. All questions, materials for analysis or letters leading to the opening of negotiations for special work will receive prompt attention if addressed to Inquiry Department, American Dyestuff Reporter, 470 Fourth Avenue, New York City.

H. R. R.—You may purify your aniline oil by redistillation, taking care not to allow the temperature to rise higher than 184 deg. Cent. The resulting distillate should be colorless and possess a specific gravity of 1.024 at 16 deg. Cent. The characteristic color reaction you mention is with solution of bleaching powder, with which it gives a deep-violet coloration. As soon as the dyes have been identified, the results will be mailed you.

R. G.—We find that the cloth has been dyed with a fast blue. Salt water soap at a temperature of 175 deg Cent. does not streak the color, and showing itself by chemical analysis to be mordanted with a chrome salt, it will be perfectly satisfactory for the purpose for which it is intended.

S. G. B.—If as you say, the color is violet on dyed cloth, and is not decolorised but changed to buff when boiled in calcium chloride solution, then it is Madder and not Alcanna as you assumed.

G. P. R.—We received your sample of acetic anhydride and find it to be adulterated with hydrochloric acid and to contain too high a content of non-volatile matter. This is the direct cause of your low yields, and would advise that you return the balance on hand to the manufacturers.

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SIZINGS—FINISHINGS—SOFTENERS

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NOTES OF THE TRADE

The demand for the more somber colors in fabrics used in the manufacture of women's apparel has, according to the trade press, temporarily given place to a fondness for brilliant hues. Of these, the "Victory colors," and a combination of the green of the Italian flag, a tearose shade and a touch of apricot, appear to have the call. The article adds, however, that there is little danger of the distaste for darker colors becoming permanent, nor for worry on the part of those who have stocked up with these lines.

With an authorized capitalization of $2,600,000, the du Pont Chemical Company has been incorporated under the laws of Delaware, the charter being granted at Dover, that State. The incorporators named are Hunter Grubb, C. R. Mudge and W. S. Thomas, of Wilmington. At the same time, a charter has been filed, also at Dover, by the E. I. du Pont de Nemours Export Company, which, with a capital of $100,000, has been incorporated by W. S. Gagan, C. R. Mudge and A. M. Gorman.

According to the *Textile World Journal,* the claim is being made by Australian chemists that they have discovered a process for the manufacture of a fast dye from a by-product of eucalyptus oil distillation known as "black-water." Nearly eighty colors have been produced and patents are being applied for.

As an offshoot of the Takamine Laboratory, Inc., which has increased its capital from $10,000 to $100,000, the Takamine Industrial Company, Ltd., of Japan, has filed an authorization at Albany, N. Y. The capital of the latter concern is 50,000 yen, and it has leased a building at 12 Dutch Street, New York City, for offices and warehouse. This firm will import chemicals and raw materials for the American market, and likewise for the manufacture of products to be made at the factory at Clifton, N. J., formerly operated by the Takamine Laboratory. At the latter place, 120 Broadway, New York City, the research work in connection with the business will be carried out under the personal supervision of Dr. Jokichi Takamine himself.

Alterations are being made in the plans for the new addition to the Giant Powder Works, Giant, Cal., which were in process of construction. The new plant will be devoted to the manufacture of dyes instead of munitions.

Notice has been filed by the Benzo Chemical Company, 39 Cortlandt Street, New York, that the capital of this concern has been increased from a nominal $5,000 to $50,000.

It is expected, according to plans being formed by the company, that new additions to its plant to replace portions of the works recently destroyed by fire, will shortly be begun by the North Western Chemical Comapny, Wauwatosa, Wis.

With a capital of $25,000, the Newport Dyestuffs Corporation has been incorporated under the laws of Maine to manufacture and deal in dyestuffs, chemicals, etc. Headquarters of the concern will be located in Portland.

Hydrosulphon Prune S, which is said to produce brilliant prune shades without resorting to topping, of excellent fastness to light and acid cross dyeing, is the latest addition of F. a Brassard & Crawford, Wakefield, Yorks, England, to their line of hydrosulphon colors. This color has been placed upon the market.

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